4eyeGrab

4 video USB grabber for surveillance

User's Manual

FEDERAL COMMUNICATIONS COMMISSION

This device complies with Part 15 of the FCC Rules Operation is subject to the following two conditions: this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B Digital Device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiated radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communication. However, there is no grantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by tuning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.
-Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help.

Notice: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CE DECLARATION

This device complies with CE . These limits are designed to provide reasonable protection against harmful interface in a residential installation.

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1.1 Introduction

VideoHome's **"4eyeGrab"** is a surveillance USB device that has the ability to record 4 camera videos simultaneously. Its unique design and easy connection through USB port provides 4 video input, which makes real-time monitoring and recording a breeze. “4eyeGrab"is small enough to fit in the palm of your hand; it is especially ideal for your notebook and portable surveillance application.

1.2 Features

- 4 video simultaneously display/recording in one board
- Display capability
  - Support for One screen/Four screen/Sequence display mode
  - Supports full screen display
  - Camera ID, date/time status display
  - Camera rename support
- Recording capability
  - Instant/Schedule recording
  - Adjustable Recording frame rate
  - Supports Linear or Circular (overwrite) mode
  - Allows independent recording on Multiple cameras
  - Time stamp support
  - Audio recording support
  - Camera ID, start date/time logged into database
  - Selectable Recording drive
- Playback capability
  - Record Information display
  - Powerful video search engine allows you to search by time mode, date mode, camera ID and so on.
  - Scroll bar to search the video you needed
  - Exact date/time and length display
  - Playback speed control
  - Rewind/Replay support
  - Snapshot support during playback
  - Print support for image capture

- Motion Detector
  - Camera Select Support
  - Detecting Sense (Low , Mid, High)set support
  - Detecting Action (Record, Alarm)set support
  - Alarm light Display

1.3 Specifications

- Display frame rate : Up to 30fps (NTSC), 25fps(PAL) for one video input, and 2-3fps for four video input
- Highest recording frame rate : Up to 30fps (NTSC), 25fps(PAL)
- Lowest recording frame rate : 1 fps(NTSC), 1 fps(PAL)
- Audio recording supports one camera only
- Still image capture : 640 x 480, JPG format.
- Analog video : 4 analog video input RCA port
- Video system : NTSC, PAL multi system support
- Recording file size 400MB per day (based on low mode and 1fps)
- Compression type : MPEG-4

1.4 Minimum System Requirements

- Video Card (system with onboard graphics chip is not recommended)
- USB 2.0 equipped computer
- Intel Pentium 4 - 1Ghz or above or equivalent AMD processor
- 128MB of RAM
- Win2k SP4 or WinXP SP1 and above

1.5 Package Contents

- 4eyeGrab unit
- 4eyeGrab driver and software CD
- User's Manual

※ ***Please make sure that your computer has USB2.0 port correctly installed and functioning before installation!***

Steps : (1) Install Driver **(see 2.21)**
(2) Plug in 4eyeGrab unit **(see 2.24)**
(3) Install 4eyeGrab AP software **(see 2.31)**

2.1 Hardware device description

USB 2.0 connector : Connect to USB 2.0 port of your computer
Composite video input : Composite video input from external A/V device (e.g. Surveillance Camera)

2.2 Driver Installation

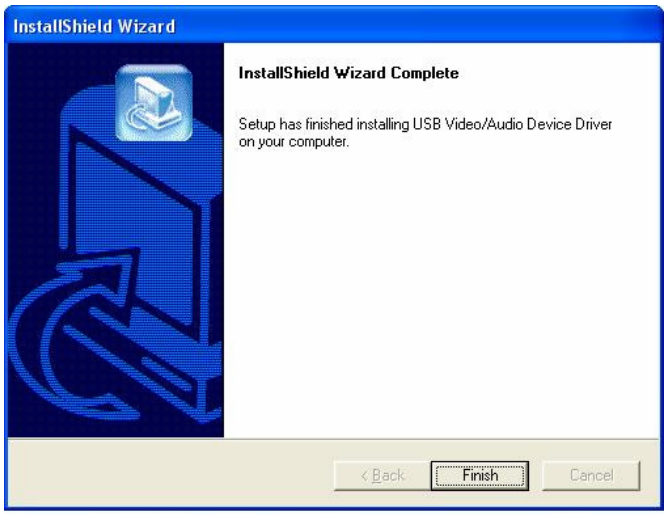
※ ***Please do not connect 4eyeGrab to the computer's USB port before driver installation!***

2.2.1. Please insert **"Multimedia Installation Kit"** CD-ROM into your CD-ROM drive; Run " **E:\4eyeGrab\Driver\Setup.exe** "; (assuming CD-ROM drive in E drive)

InstallShield Wizard
Welcome to the InstallShield Wizard for USB Video/Audio Device Driver
The InstallShield® Wizard will install USB Video/Audio Device Driver on your computer. To continue, click Next.
< Back
Next >
Cancel

Click "**Next**"

2.2.2. Complete Setup Wizard



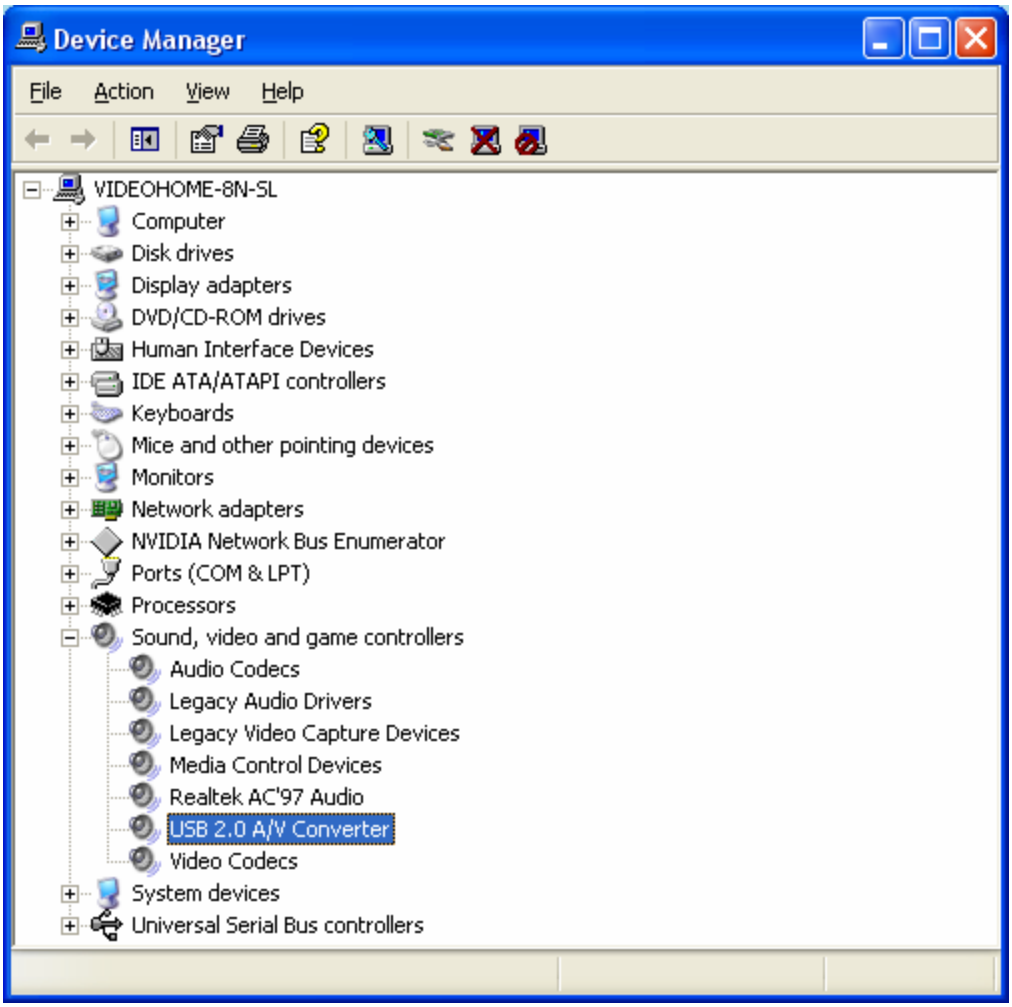
Click "**Finish**"

2.2.3. After completing Setup Wizard, please restart your computer

2.2.4. After computer is restarted, please plug the 4eyeGrab device into your computer's USB2.0 port**;** System will detect your new device and install completely.

2.2.5. In order to check whether or not your 4eyeGrab driver was installed successfully;

Go to My Computer -> Control Panel -> System -> Hardware -> Device Manager



2.3 Application Software (4eyeGrab) Installation

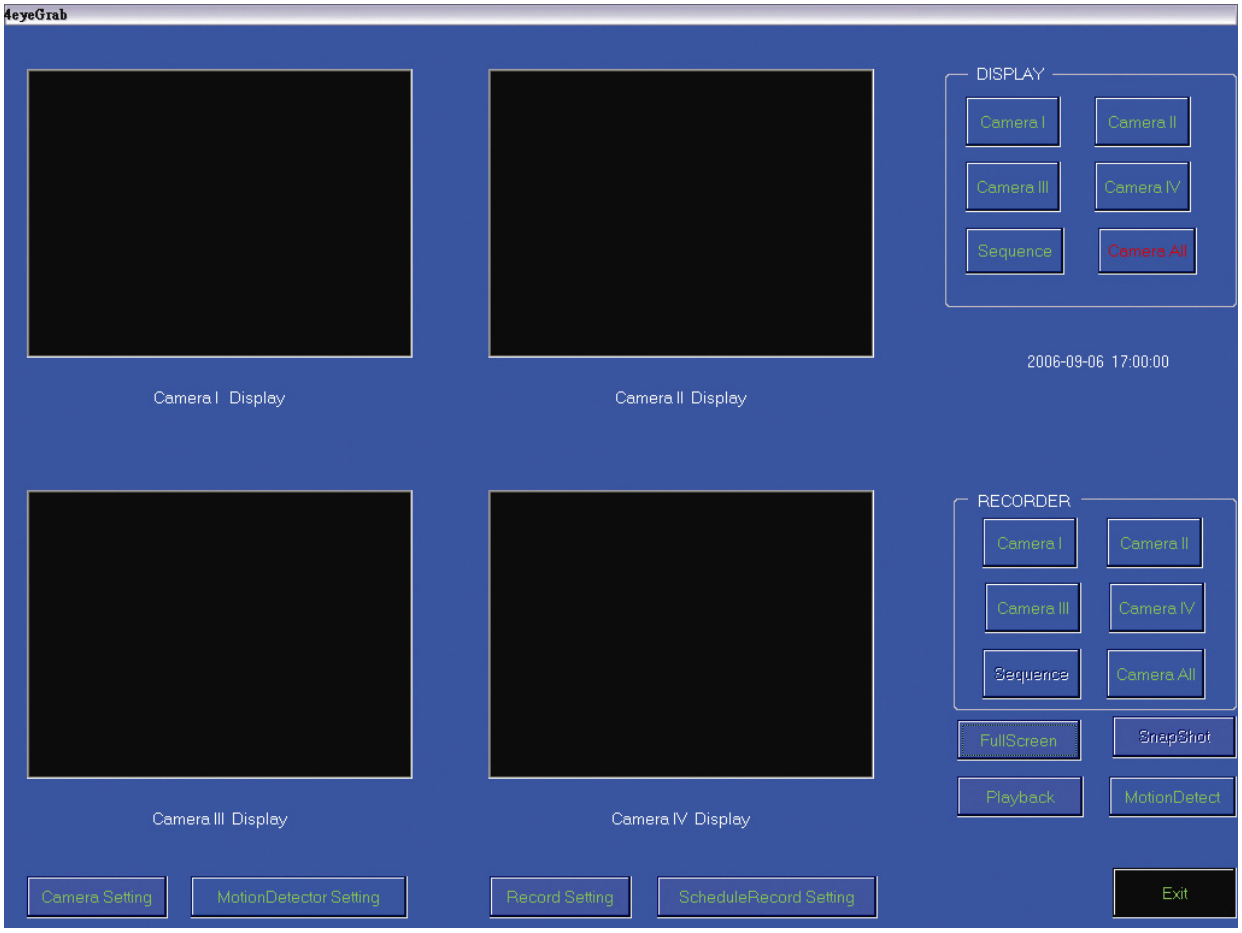
3.01. Please insert "**Multimedia Installation Kit"** CD-ROM into your CD-ROM drive; Run " **E:\4eyeGrab\AP\Setup.exe** "; (assuming CD-ROM drive in E drive)
3.02. Welcome to the InstallShield wizard; Click "**Next**"
3.03. Choose your destination location; Click "**Next**"
3.04. Install **Windows Media Format 9 Series Runtime Setup;** Click "**Yes**"
3.05. License agreement; Click "**Yes**"
3.06. Finish Windows Media Format 9 Series Runtime installation; Click "**OK**"
3.07. License for Windows Media Tools Setup; Click "**Yes**"
3.08. Windows Media Tools Setup; Click "**Next**"
3.09. Create folder; Click "**Yes**""
3.10. Installation Options; Click "**Next**"
3.11. Installation Directory; Click "**Finish**"
3.12. After Setup is completed; Click "**OK**"
3.13. InstallShield Wizard is now complete; Click "**Finish**"
3.14. Please restart your computer

After AP software is installed correctly, you should now see the following icon on your desktop

4eyeGrab : Double-click this icon to start the AP software
Make sure that your 4eyeGrab unit is plugged into your USB2.0 port, otherwise the AP will not be able to start!

3.1 Display Mode

4eyeGrab AP Main Screen



Red color text represents the function running
Green color text represents the function can be execute
White color text represents the function can not execute at this time

- The camera screen will show up one by one when clicking on "**Camera I through IV"** individually in four display window

- Click on "**Camera All"** will show all of the camera on four display window simultaneously.
  Double click one of four display window will change to one display window mode.

- Click on "**Sequence"** will show the Cameras one in one display window at a time (Each Camera's Display Time in Sequence mode is determined under the Sequence Time Setting in Camera Setting mode; see p.11; 3.7) Double click one of the four display windows will fix the camera video source.

- Right-click Function :

(1) Display : Here you can choose to display any camera/all of the cameras at the same time
(2) Recorder : Here you can start recording from any camera/all of the cameras you choose
(3) About : Show the current version of 4eyeGrab AP software installed on your system
(4) Exit : Close 4eyeGrab software
(5) Always on Top : Makes your 4eyeGrab window be displayed above all other windows, in order to avoid focus stealing

3.2 Recorder Mode

- The camera screen will be recorded one by one when clicking on Camera I through IV individually.

- Click on "**Camera All"** will record all of the camera on screen Simultaneously; each camera video record individually (four camera video file)

- During sequence mode click on "**Sequence"** will record all of the Cameras at the same video window (one video file for four cameras)

Recorded file save to **YYMMDD_hhmmss.avi** file name
YY : Year; **MM** : Month; **DD** : Day; **hh**: Hour; **mm** : Minute; **ss** : Second

3.3 FullScreen

- Click on "**FullScreen"** to view your current camera(s) in full screen mode Double click the full screen mode will back to normal mode

3.4 SnapShot

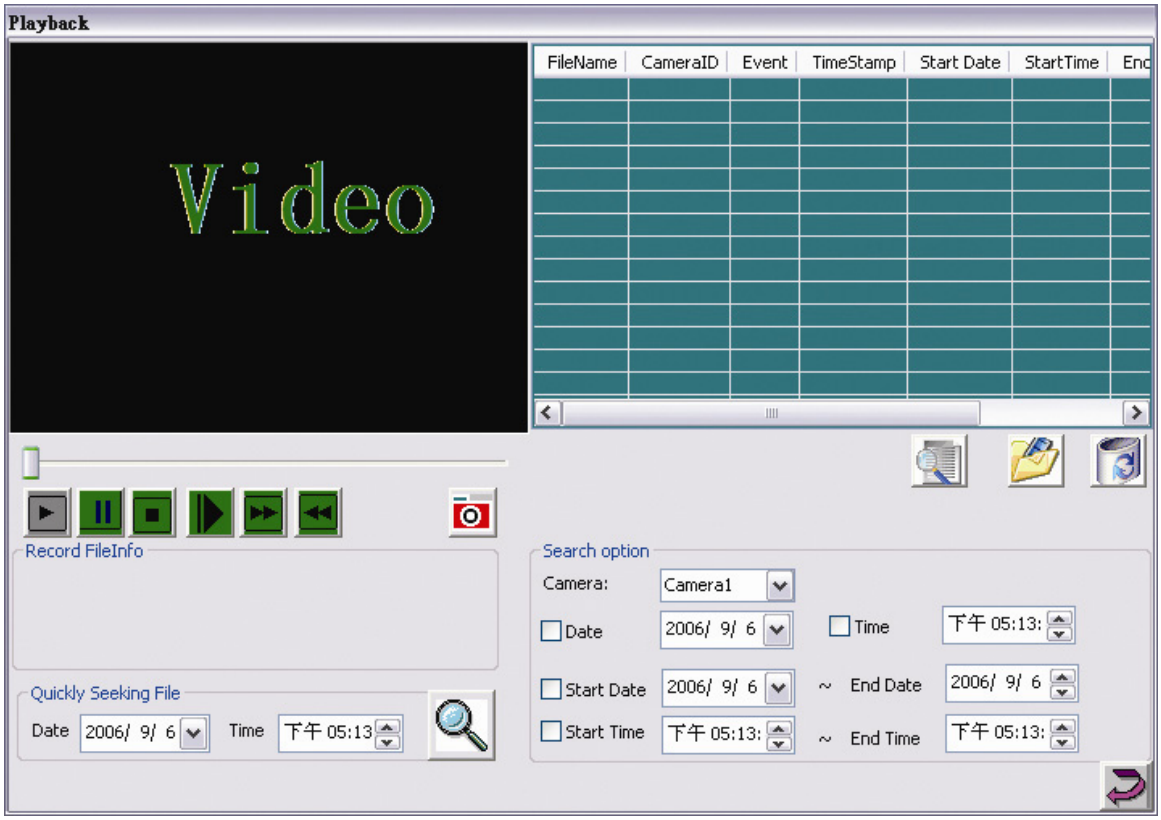
- During one video display window(include sequence display), click on **"SnapShot"** will allow you to capture an image of the current viewing camera screen.

- After SnapShot, the captured image will show up on the snapshot window; right-click on the captured image in order to choose Save/Delete/Preview/Print.

Captured image(s) are automatically saved to
YYMMDD-hhmmss.avi file format
YY : Year; **MM** : Month; **DD** : Day; **hh**: Hour; **mm** : Minute; **ss** : Second

3.5 Playback

➢Click on "**Playback"** to bring up the Playback window



➢Video Output Screen Shows the current video being played

➢There are several ways to find the file you recorded

(1) In the "**Search option"**, specify which camera(s) then click **Find**. This will list all of the files recorded by that specific camera(s)

(2) If you know the exact **Date** and/or **Time**, you can also choose to check the box beside Date and Time in order to look for the file(s) you recorded

(3) If you are unsure of the exact Date and/or Time, you can still find your recorded file by inputting a **Start** and **End date**, and/or **Start** and **End time**.

➢**Play** - Plays the video file you currently selected

(1) Double click the file in the list that you want play

(2) Choose file and click **"Open"** to play

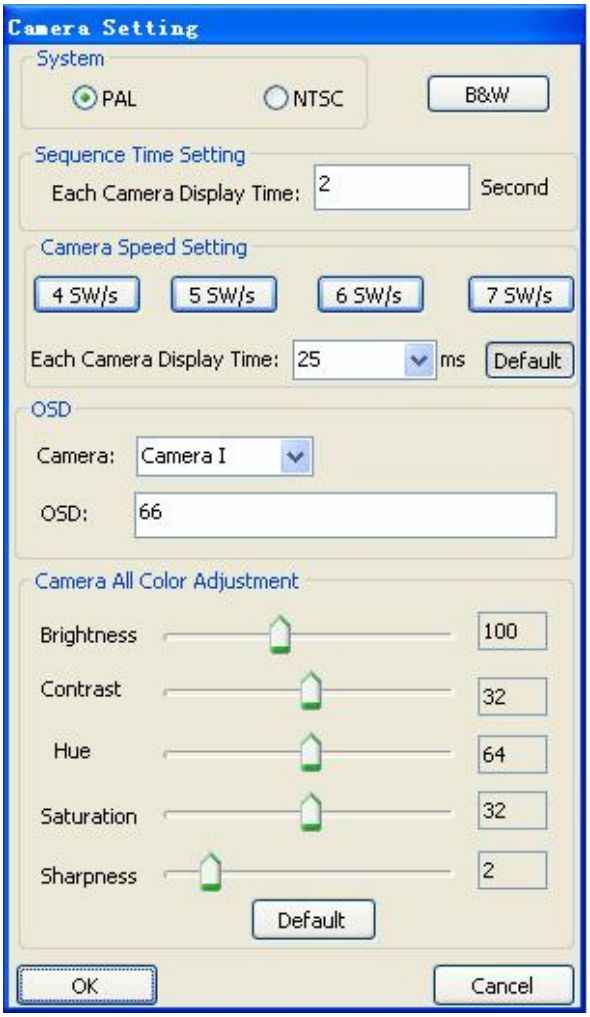
- **Pause** - Pauses the current video being played
- **Stop** - Stops the current video being played
- **Slow 1/2x, 1/3x, 1/4x** - Slows down the speed of the current video being played
- **Fast 2x, 3x, 4x** - Speeds up the current video being played
- **Rewind 1x, 2x, 3x, 4x** - Rewinds the current video being played
- **SnapShot** - Captures the current frame on the video being played
  Captured image(s) are automatically saved to
  YYMMDD-hhmmss.avi file format
  YY : Year; **MM** : Month; **DD** : Day; **hh**: Hour; **mm** : Minute; **ss** : Second
- **Record FileInfo**
  Displays information about the current video being played:
  Recording start time/Recording end time/Size of the file/
  Duration of the video
- **Quickly Seeking File:**
  Allows you to quickly search for a video file recorded in your Record directory; specify the date first then pressing Seek
  (format : Date YYYY/MM/DD Time AM/PM hh/mm)
- The **Purple Arrow** on the bottom right of the Playback window returns you to the 4eyeGrab main screen

3.6 MotionDetect

- Click on "**MotionDetect"** to allow the camera to record immediately upon detecting any sort of movements. ***Camera will stop recording after 5 seconds when no movement is detected**

➢ The **Alarm light Display** will show up in the middle of the screen

3.7 Camera Setting



➢ Choose between **PAL, NTSC, or Black and White** mode for your camera(s)

➢ **"Sequence Time Setting" -> "Each Camera Display Time"** Allows you to specify the period of time between switching from one camera screen to the next in Sequence display

➢ **Camera Speed Setting** allows you to change your camera's speed setting depend on your Computer CPU & VGA speed.
4 SW/s : Switches four camera display windows per second.
5 SW/s : Switches five camera Display windows per second.
Each Camera Display Time : Setup display time in each camera.

e.g. If you choose 4 SW/s and 25ms, it will take a total of 100ms (4 multiples for 25 equals 100) for four display windows, and a total of 900ms for switching to four display windows (Subtract 100ms from 1 second equals to 900ms).
Note : If you setup switching time shorter, it might make unstable video display, please setup this setting for best performance

➢ Clicking on **Default** will restore the original settings

➢ OSD allows you to **rename** your Cameras

- Under **Camera All Color Adjustment** you can adjust different values, which includes **Brightness/Contrast/Hue values/Saturation/ Sharpness**

- Clicking on **Default** will restore the original settings

- Click on "**OK"** to accept and save your settings

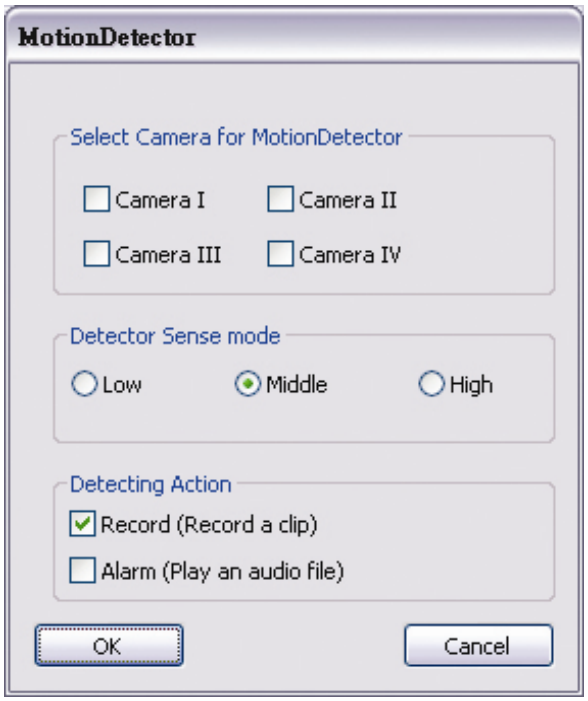
- Click on "**Cancel"** to return to 4eyeGrab's AP main screen without saving your settings

3.8 MotionDetector Setting

- Here you can select which camera to use Motion Detector recording

- **Detector Sense Mode** (**Low, Middle,** and **High)** : you can select the sensitivity for your camera before activating Motion Detector recording

- **Detecting Action** : Here you can specify what the action will do right after your camera(s) detect any sort of movement



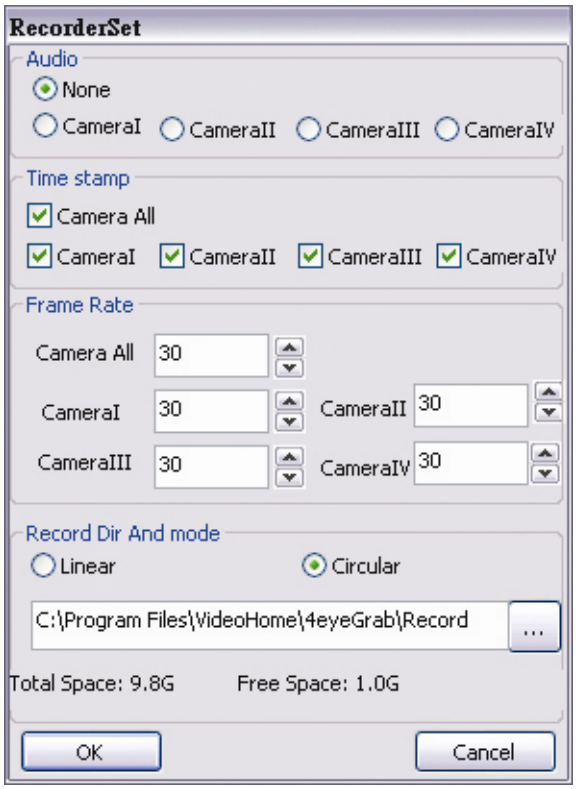
- **Recordin**g will immediately start when Record is checked

- Selecting **Alarm** will play a preset alarm audio file immediately when Motion Detector recording starts

- Click on **OK** to accept and save your settings

➢ Click on **Cancel** to return to 4eyeGrab's main screen without saving your Settings

3.9 Record Setting



➢ **Audio** : Here you can select which camera to record **Audio.**
***Note :** audio can only be recorded on one camera at a time

➢ **Time stamp** : You can specify whether or not Time Stamp will show up while recording from your camera(s)

➢ You can change the **Frame Rates** of your camera(s)

➢ **Record Dir And mode** :

(1) **Linear** mode allows you to keep recording until there is **only about 30Mbs of free space left** on your Hard Disk

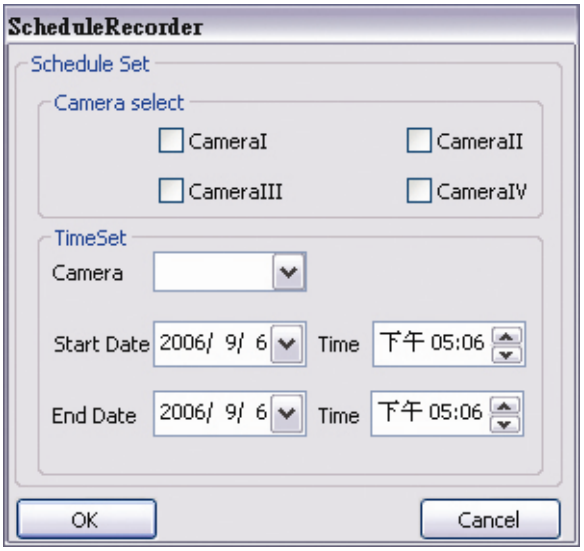
(2) **Circular** mode allows you to **keep recording by going back on your current recorded file** and overwrites it as needed, if there's not enough available free space on your Hard Disk.

(3) You can change your Default saving path of your recorded videos if you wish to do so. Change the path by typing in the text box, or by selecting a new folder by pressing the **[...]** button located on the right of the path

➢ Click on **OK** to accept and save your settings

➢ Click on **Cancel** to return to 4eyeGrab's main screen without saving your settings

3.10 ScheduleRecord Setting



- TimeSet : Select from Camera I-IV (Only selectable when box is checked in Camera Select)

- Here you can pick and schedule your cameras to **start** recording and **end** on any specific date and time. Your output file will automatically be saved as (**YYMMDD_hhmm**) format. (e.g. 060901_1315)

- Click on **OK** to accept and save your settings

- Click on **Cancel** to return to 4eyeGrab's main screen without saving your settings

3.11 **Exit** : Close your 4eyeGrab AP software

Q1 : Why can't my system detect 4eyeGrab?

A2 : Make sure you **enable USB2.0** in the motherboard BIOS setup
Also, please make sure that your system has the latest USB2.0 host driver.
For Win XP, please upgrade to Service Pack 1 or above.
For Win2000, please upgrade to Service Pack 3 or above.

Q2 : Why does the my system show **"High Speed device plug into Full speed USB port…"**

A2 : Please make sure your system support USB2.0 hardware port.

Q3 : Why do I get unstable video during preview and recording?

A3 : If you are using Ultra DMA hard disk, please updated latest driver of IDE ATA/ATAPI controller.
Some motherboard bundled drivers are not latest version, we suggest that you use XP system bundled driver.

Q4 : How can I get minimum number of dropped frames during video capture ?

A4 : The best recording performance depends on your computer system performance. However,you can still take some of the steps below in order to improve the performance
1. Enable Hard Disk drive DMA :
2. Go to **My Computer -> Control Panel -> System -> Hardware -> Device Manager -> Disk drives** to setup
3. Have more available free space in your Hard Disk
4. If possible, use a Hard Disk with speed of more than 7200 rotation per minute
5. Disable Power Management in BIOS
6. Close any other applications/programs you're not currently using
7. Try not to run any other program(s) during recording
8. Defrag your Hard Disk

Q5 : I can preview video but when recording, the system crashed/hanged

A5 : 1. Please make sure to install **DirectX 9.0 or above** on your system.

2. See if you can update your video card driver to see if it's a direct draw issue.

3. Your system might have too many programs open which are taking up memory. Please close unnecessary programs.

4. Please try and lower the hardware accelerator by the following:
My Computer -> Control Panel -> Display -> Settings -> Advanced -> Performance to adjust it.